

DOCUMENT RESUME

ED 249 380

CE 039 829

AUTHOR Cave, Julie; And Others
TITLE Health Services: Clinical. Radiographic Aide.
Instructor's Manual. Competency-Based Education.
INSTITUTION Kentucky State Dept. of Education, Frankfort.
PUB DATE 83
NOTE 70p.; For related documents, see CE 039 821, CE 039 823, CE 039 825, and CE 039 827.
AVAILABLE FROM Kentucky State Department of Education, Director for Curriculum Development, 2024 Capital Plaza Tower, Frankfort, KY 40601.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Allied Health Occupations Education; Behavioral Objectives; *Biomedical Equipment; Classroom Techniques; *Competency Based Education; *Diagnostic Tests; Employment Opportunities; Equipment Maintenance; Equipment Utilization; Health Services; Instructional Materials; Learning Modules; Lesson Plans; *Medical Assistants; Medical Services; Physical Examinations; Postsecondary Education; *Radiologic Technologists; *Radiology; State Curriculum Guides; Student Needs; Teaching Methods
IDENTIFIERS Kentucky; Special Needs Students

ABSTRACT

This instructor's manual consists of materials for use in presenting a course in the occupational area of radiographic aide. Included in the first part of the guide are a program master sequence; a master listing of instructional materials, equipment, and supplies; an overview of the competency-based vocational education (CBVE) system; and guidelines and strategies for addressing students with special needs. The major part of the publication comprises instructor's guide sheets, master copies of the instructor's final checklist, master copies of the check-out activity sheets, answer keys for the check-out activity sheets, and student modules. Provided in the student modules are learning activities, instruction sheets, and self-check activities dealing with the following topics: learning about radiodiagnostic careers, assisting the patient with the bedpan or urinal, preparing the outpatient for radiographic examinations, and maintaining the radiodiagnostic room. (MN)

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Instructor's Manual

HEALTH SERVICES: CLINICAL Radiographic Aide

Competency - Based Education

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Kentucky Department of Education
Raymond Barber, Superintendent of Public Instruction

Instructor's Manual
for
HEALTH SERVICES CLINICAL
Radiographic Aide

Materials Developed By:

Julie Cave
Health and Personal Services Occupations Unit
Division of Post-Secondary Program Management
Bureau of Vocational Education
Kentucky Department of Education

Materials Revised By:

Judy Russell Walters
Unit for Curriculum Development
Division of Materials and Curriculum
Office of Research and Planning
Kentucky Department of Education

Materials Edited By:

Bobby Crosswhite
Office of the Superintendent of Public Instruction
Kentucky Department of Education

1983

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[Student Package]

FOREWORD

The purpose of this instructor's manual is to aid the instructor in managing the use of modules for Health Services: Clinical Area of the Radiographic Aide. Review the TABLE OF CONTENTS for the location of the Instructor's Guide Sheets for these modules.

A PROGRAM MASTER SEQUENCE, a HEALTH SERVICES: CLINICAL COMPETENCIES (Sample Evaluation) for the radiographic aide, and a MASTER LISTING OF INSTRUCTIONAL MATERIALS, EQUIPMENT, AND SUPPLIES have been prepared to provide an over-all view of the program and the instructional needs.

To aid the instructor in understanding competency-based vocational education, a section is provided about the CBVE instructional system. For helping the instructor meet the needs of special students, a section about identifying students with special needs, formulating a basic approach to teaching these students, and using special strategies and redirecting teaching strategies is provided.

ACKNOWLEDGEMENTS

The Health Services curriculum effort is the result of the contributions of a number of people. We wish to thank each of the following individuals for their part in this endeavor.

- For field testing the Health Services--Clinical modules:

Linda Craig
Clinton County AVEC
Albany, KY

Diane Sharp
Health Services
Laurel County High
London, KY

Elizabeth Erwin
Barren County AVEC
Glasgow, KY

James Isenberg
Barren County AVEC
Glasgow, KY

Searoba Wilson
Bowling Green SVTS
Bowling Green, KY

- For support services from the Office of the State Superintendant of Public Instruction:

Editor

Bobby Crosswhite

- For support services from the Unit of Curriculum Development:

Word Processor Typists

Renita Van
Sheila Warren

Artists

Mildred Hackney
Gladys Owens

PROGRAM MASTER SEQUENCE
HEALTH SERVICES: CLINICAL
Radiographic Aide

Code Number	Module Title	Module Stock Number
HS-RA-1	Learning About Radiographic Careers	5-985
HS-RA-2	Assisting the Patient with the Bedpan/Urinal	5-987
HS-RA-3	Preparing the Outpatient for Radiographic Examinations	5-988
HS-RA-4	Maintaining the Radiographic Room	5-989

HEALTH SERVICES: CLINICAL COMPETENCIES

RADIOGRAPHIC AIDE--D.O.T. #078.362-027

(Sample Evaluation)

Student's Name: _____

Address: _____

Date Entering Program: _____

Date Completing Program: _____

Evaluation Code*:

0. The task was not applicable.
1. The student completed the task with close supervision.
2. The student completed the task with limited supervision.
3. The student completed the task without supervision.
4. The student completed the task at job-entry level.

<u>EC*</u>	<u>TASK LIST</u>	<u>MODULE NUMBER</u>
_____	1. Name a national accrediting agency for radiologic technologists (radiographers).	HS-RA-1
_____	2. Draw an organizational chart of the radiology department.	HS-RA-1
_____	3. Define radiological terms.	
_____	4. Assist the patient in using a bedpan.	HS-RA-2
_____	5. Assist the patient in using the urinal.	HS-RA-2
_____	6. Prepare outpatients for radiologic studies.	HS-RA-3
_____	7. Clean the radiographic room.	HS-RA-4
_____	8. Maintain the radiographic room.	HS-RA-4

EC*TASK LISTMODULE NUMBER

9. Check card file for record of previous x-rays on patients.
10. Fill out x-ray ID card.
11. File reports with films.
12. File x-ray film folders.
13. Distribute reports to nursing stations.
14. Distribute reports to physician's boxes and mail reports to specified physicians.
15. Distribute cassettes to proper x-raying room.
16. Practice safety in the radiology department.
17. Assist in positioning patients for x-rays.
18. Obtain patient's chart from nursing station.
19. Assist with administration of appropriate chemical mixtures to patients under the direction of the radiologist/technician.
20. Arrange, attach, and adjust immobilization and/or support devices.
21. Assist with the application and adjustment of the lead apron.
22. Schedule patient for x-rays.
23. Distribute supplies.
24. Obtain preparation trays for special procedures from central supply.
25. Prepare charge slips for services rendered.
26. Prepare trays for special examinations.
27. Identify and describe the major components of the control panel.
28. Operate automatic processor.
29. _____
30. _____
31. _____
32. _____
33. _____
34. _____
35. _____

MASTER LISTING OF INSTRUCTIONAL MATERIALS,
EQUIPMENT, AND SUPPLIES

• Recommended References:

NONE

• General Instructional Equipment:

- Filmstrip projector
- Film projector
- Cassette tape player/recorder
- Overhead projector
- Projection screen

• Equipment and Supplies:

- Male mannequin
- Urinal
- Bedpan
- Toilet tissue
- Equipment and supplies for patient to use to wash hands
- Draw sheet
- Cleaning cloths
- Disinfecting product
- Bucket

**OVERVIEW OF THE
CBVE
INSTRUCTIONAL
SYSTEM**

Competency-Based Vocational Education
Using the Instructor's Manual
Managing a CBVE Program

Competency-Based Vocational Education

The purpose of this manual is to aid the instructor in implementing a competency-based instructional program. It is intended as a guide and resource for the teacher using CBVE modules or task assignment sheets.

CBVE is based on competency. The instructional system incorporates (1) the competencies for specific occupations built around worker tasks (2) performance objectives and (3) the specified minimum standards of performance required for entry-level jobs. The performance objectives include: (1) the skills (or tasks) which the student must learn; (2) the conditions under which the student must perform; and (3) the standard or level of achievement to which the student must perform. The learning activities are directly related to job skill.

In addition to competency development, the materials address (1) readability; (2) variety of learning activities; (3) elimination of sex stereotyping; and (4) curriculum modification for disadvantaged and handicapped students.

The Curriculum Unit which develops and implements competency-based instructional materials is located in the Kentucky Department of Education, Office of Research and Planning, 1912 Capital Plaza Tower, Frankfort, KY 40601.

In addition, each vocational region has a CBVE Contact Person to assist with implementation. Any problems or concerns about your CBVE program should be discussed with your Regional Contact Person.

Each teacher is to receive inservice involving how to conduct a competency-based program and utilize competency-based materials prior to implementation. In addition, Inservice Education modules are available as references, giving detailed suggestions for setting up and managing a CBVE program.

Using the Instructor's Manual

This instructor's manual is divided into three sections: course introduction, program organization, and an instructor's guide to learning activities.

The Instructor's Guide to Learning Activities is the heart of this manual. It contains a brief listing of the contents of each module with suggestions for their use. Removing the guide sheets and filing them with the corresponding modules will give the instructor the complete materials for lesson planning in one place.

Format is consistent throughout all modules. Each contains the same basic components:

Introduction - tells the student what he/she will learn and why it is important.

Directions - lists any prerequisites to the module and directs the student to either the learning activities or check-out activity.

Objectives - clearly state what the student is expected to know or do, under what conditions, and how well.

Learning Activities - a "road map" for the student to follow in going through the module or assignment sheet; lists the various activities the student will perform in learning the task.

Instruction Sheets - may be job sheets, information sheets, etc., that provide the student with important information or practice.

Student Self-Checks - brief, objective tests that serve as progress checks for the student; usually cover the cognitive information presented in the module.

Instructor's Final Checklist - tells the student and the instructor exactly what the student will be evaluated on in the check-out activity; the instructor uses this sheet to rate the student's performance.

Check-Out Activity tells the student what he/she will be asked to do for the final test or performance.

The Instructor's Guide Sheets in this manual present the essential information in the modules in capsule form. In addition, they list: notes and suggestions for instruction; the recommended references and audiovisuals; necessary tools and equipment; and space for teacher's notes.

The modules are designed to be left intact. Students should be reminded not to write on any of the pages. In some cases, they will be required to obtain duplicates or sheets like the ones shown. A supply of all master copies the instructor elects to use should be made in advance and filed with the modules or placed in a file for ready use.

There are also pages that the student needs that are not contained within the modules. These are usually the check-out tests, but they may also be other materials which are supplemental to the actual module. These pages should also be filed separately and kept by the teacher. They should be accessible to the students at the appropriate time.

Managing a CBVE Program

Managing a CBVE program is no easy task. However, if time and care are taken in setting up the program, it can be managed with a minimum of difficulty. The important thing is to implement a system that will work in your classroom, and then carry it through consistently. For example, you will want to establish some procedures for the storage and use of modules, student folders, reference books, slide-tape presentations, audio-visual equipment, etc. Refer to Module IE-8, "Managing a CBVE Program" for specific suggestions.

As with any change or innovation in classroom procedure, students will be more receptive to CBVE if you spend time orienting them to the new way of doing things. When you first implement your program, set aside a day or two to familiarize students with the modules or task assignment sheets and accompanying media. Demonstrate the proper use of the audio-visual equipment. Familiarize students with your management system, i.e., where to obtain modules or assignment sheets and return them when completed, where to file check-out activities, etc. Remember that your enthusiasm about CBVE is catching! If students see that you believe in CBVE they will much more likely accept and use it. Don't forget to orient additional students who come into your program later in the year. (For more suggestions, see Module IE-8, "Managing a CBVE Program.")

Since student demonstration of competency in a task is an essential concept in CBVE, the modules or assignment sheets have been designed for individualized instruction. This does not mean that material cannot occasionally be presented in large or small group settings. Some lessons, such as safety, might best be presented to the whole class, but students must individually demonstrate their knowledge of safety procedures and practices. In some programs, small group discussion may facilitate the understanding of some concept, or a team of three to four students might work together on some project. When checking out, however, each student must be able to demonstrate his/her competence in performing each task. See Module IE-8 for additional suggestions.

Teachers often ask about grading students. There is no easy solution to the problem of grading in a competency-based program. Some suggestions are given in Module IE-9, "Evaluating Students and Keeping Progress Records." The primary basis for grading is student performance on the Instructor's Final Checklist. You must devise a system of assigning grades. (See IE-7, "Evaluating Students and Keeping Student Progress Records.")

ADDRESSING STUDENTS WITH SPECIAL NEEDS

Identifying Students with Special Needs

Formulating a Basic Approach to Teaching

Using Special Strategies

Redirecting Teaching Strategies Usually Used

ADDRESSING STUDENTS WITH SPECIAL NEEDS

Some students may need special help in achieving competency. Ideas are presented here for helping identify those students and modifying materials and techniques to help them succeed.

Identifying Students with Special Needs

Generally speaking, those students who cannot succeed in the regular vocational education programs without special help are termed "students with special needs" (Vocational Educational Act of 1963 and Amendments). Persons most likely to be identified as students with special needs are the academically and economically disadvantaged and the handicapped--the mentally retarded, deaf and hard of hearing, speech impaired, emotionally disturbed, orthopedically (physically) impaired, health impaired, and learning disabled.

The handicapped are further identified as those (1) with a physical or mental disability that substantially impairs one or more major life activity--walking, seeing, hearing, speaking, working, or learning; (2) who have a record or history of such impairment or condition; and (3) are regarded as having an impairment (Rehabilitation Act of 1973). Women, minorities, the limited English speaking, and others likely to be underemployed or striving for equal opportunity in employment, when meeting the criteria for academic or economic deprivation, are specifically identified in the disadvantaged group to be given special help.

Formulating a Basic Approach to Teaching

Society recognizes the right of every individual to an appropriate education, and the law mandates giving persons with special needs an equal chance. In brief:

1. The Vocational Education Amendments of 1976 give special emphasis to developing and providing programs of vocational education for "those with special educational handicaps" and reserve moneys to do so.
2. The Education for All Handicapped Children Act of 1975 assures that all handicapped children between the ages of three to twenty-one have available to them a free, appropriate public education which relates to their unique needs and is provided in the least restrictive environment.
3. The Rehabilitation Act of 1973 prohibits discrimination on the basis of handicap in any program or activity receiving federal financial assistance and directs employers to take affirmative action in hiring handicapped people.
4. The Education Amendments of 1972 prohibit discrimination on the basis of sex in educational programs receiving or benefiting from federal financial assistance.

5. The Civil Rights Act of 1964 prohibits discrimination in employment on the basis of sex, race, color, religion, or national origin in any program or activity receiving federal financial assistance--including training for employment.

We must, then, provide equal opportunity to learn in our instructional processes.

Basically, an approach to teaching which recognizes individual differences in all students provides the best atmosphere for disadvantaged and handicapped students. This approach allows students to work at different rates; involves large group, small group, and individual instruction; incorporates a variety of instructional materials, media, and teaching techniques; and involves a variety of learning activities--reading, doing, discussing, listening, viewing, experiencing, sharing, cooperating, relating, using the senses, etc. It gives disadvantaged and handicapped students the dignity of exploring, learning, and facing the same experiences and responsibilities as other students, without limiting their possibilities by stereotyped concepts of what they can or cannot do.

It involves being organized, with students completely familiar with the teaching/learning plan. When beginning a CBVE class, for example, explain what learning to attain competencies means, how the students will carry out their work, how to use the modules, where to find materials, how and when tests will be given, how "passing" or competency is determined, and what your role as a teacher is.

It also means teacher direction for those students who are not self-directed learners--those with poor academic backgrounds who thrive on teacher interaction and need immediate feedback, instruction simplified, procedures modified, social development as well as specific job skills, role models, or other special aid. For these students, the learning activities described in the modules may become the teacher's lesson plan and utilized in large-group and small-group settings before the individual student attempts doing learning activities alone. The teacher-directed class might proceed as follows: teacher introduction to tasks to be performed by module or cluster of modules, explanation of what is to be learned and why, presentation of information in small chunks, demonstration of how, student tryout and practice, time for questions and answers, trial test followed by reteaching, and evaluation. The teacher will employ a variety of strategies to address the learning needs and styles of the student.

Using Special Strategies

In order to determine the most appropriate teaching strategies, assess the class for kinds of special help required, and develop a plan for meeting any unique needs. Refer to Mainstreaming Guidebook for Vocational Educators by Dahl, Appleby, and Lipe, Olympus Publishing Company, Salt Lake City, Utah 84105, for modifications and general classroom strategies for meeting the unique needs of the different handicapped populations.

Also, enlist the advice and help of employers, support personnel, and agencies and organizations serving disadvantaged and handicapped populations in your school system and geographic area.

Redirecting Teaching Strategies Usually Used

Many of the strategies usually used with regular students may be redirected or modified and also provide effective learning activities for students with special needs. An explanation of how this may be done follows.

AUDIO-VISUALS (films, filmstrips, slide/tape, videotapes, and ETV and commercial television programs). The combination of sight and sound provides more effective communication than either sight or sound alone. Audio-visuals may be used to supplement or replace other methods of presenting information. The hearing impaired will require captioning, signing, or a printed script written at the appropriate reading level or presenting only essential details. The visually impaired may glean information from the sound source, but additional explanation will need to be provided for any visual display of information which is not explained adequately by the narration. Some audio-visual presentations, particularly 8 mm and 16 mm films, may move too fast for the information to be grasped and need to be evaluated with this in mind.

CONTACT WITH WORK ENVIRONMENT. Handicapping conditions, limited finances, geographic isolation, cultural difference, limited communication skills, and social isolation have caused disadvantaged and handicapped persons to have little contact with the world of work. Familiarity with the work setting in which a particular job takes place, relationships with other workers, business use of the telephone, relationship of one's job to other jobs in the same business are just a few examples of areas where special students may require special exposure by means of field trips, spending a day on the job, viewing films, or having additional training sessions.

NOTE: For those with physical impairments, field trips, on-site job observations, and work experience opportunities will be limited to "accessible" businesses in the community. Before deciding where to go, determine whether the facilities are accessible.

DEMONSTRATION AND TRYOUT. Demonstration by teacher, experienced workers, and previously trained students provide reliable role models for learners. Steps, procedures, precautions, physical manipulation, and techniques are imprinted visually in the order and at the time they should occur in task performance. Immediate tryout of the task following the demonstration or an immediate attempt of each step, technique, or procedure as it is demonstrated provides students direct involvement, permits correction and clarification, and promotes retention. Tryout also identifies areas in performance steps, techniques, tools, and work environment where handicapped students need to have modification in order to perform tasks and meet industry standards.

ELIMINATION OF STEREOTYPING. Disadvantaged and handicapped people face more than the sex role stereotyping myths in their quest for employment. The following are just a few examples: "Deaf people are dumb." "The best job for blind people is tuning pianos." "He'll never be able to do that; he's a cripple." "Mr. _____ was no good; so will be his son." "She can

never do that; her parents didn't go to college." In addition to overcoming the unfounded assumptions of others, disadvantaged and handicapped often have equal misconceptions about themselves thinking: "I can never do that." "_____, who is deaf does assembly line work; that's what I'll do, too." "I'll never be anybody."

Overcoming stereotyping may begin with using sex fair instructional materials and media, exploring interests and abilities, exploring two or three nontraditional jobs, or complimenting accomplishments. It may include planning how to reach an educational goal, providing role models (person with like handicap or socioeconomic background who has succeeded), as well as observing persons in nontraditional work roles. It means doing whatever raises aspirations and increases self-worth. It means attempting to eliminate underemployment.

EMPLOYER INVOLVEMENT. Programs with employer input are more practical and in line with the current needs of the job market. Employers who make input feel a special kinship to the program and get a chance to see the students before meeting them in the job market.

For disadvantaged and handicapped students, employer involvement offers a very special opportunity to remove common misconceptions about their capabilities. It enables employers to help with any modification needed, see students performing tasks, and observe how the students relate to others. It gives students a chance to prove that they can do the work, that they will not endanger themselves or others, and that they will not increase expenses. These are major employer concerns. Both students and teachers should be prepared to provide reassuring answers and evidence to show there is no more risk than with the nonhandicapped.

Employers may be involved by giving class presentations; giving suggestions for program improvement and modifications; conducting mock interviews; and providing work experience, observations and worker interviews, job analysis, etc.

HANDS-ON EXPERIENCES, PROBLEM SOLVING, PERSONAL INVOLVEMENT (work samples, tryout exercises, games, role playing). Being involved in a sample of work through completing a product, performing related paper work, or role playing interpersonal relationships on the job keeps students interested, holds attention to the learning tasks, and injects the realities of working and job performance in the teaching/learning situation. It makes the student feel that the instruction is practical and valuable. Accomplishment means "qualified for work"--a great boost to self-esteem for those who doubt self-worth.

The instructor and other students should avoid taking over when handicapped students are awkward or slow in completing a task. The student cannot master the skill if someone else does it.

ILLUSTRATIONS (pictures, graphs, bulletin boards, transparencies, and other visuals). The disadvantaged, the mentally retarded, and the hearing impaired, particularly, are especially oriented to visual methods of learning. Other students, with the exception of the blind and some visually impaired, will appreciate visual presentation of information to

be learned. Student handouts, with the steps to a task illustrated and briefly and simply explained, are especially helpful. Captioning and brief explanations are important supplements. Many illustrations may be adapted for the visually impaired by making them tactile (so that they can be felt). Sometimes enlarged print and bold outlines help.

INTERACTION; INDEPENDENCE. Economic deprivation, geographic isolation, cultural isolation, and restrictions on mobility and social relationships imposed by physical impairments have limited the experiences of the disadvantaged and the handicapped in the community at large. Many have no previous work experience, little observation of the worker's daily routine, and limited social experiences. They have been sheltered at home, absent from the scene, at best onlookers.

So that they will not continue in this role after vocational training, experiences in the community and involvement with nonhandicapped people and other students are of utmost importance. These students, as well as their families and the working community, need proof that they can function independently and competently. They need to establish contacts who can serve as references to recommend them as competent workers who can relate to others.

Field trips, worker interviews, cooperative work experience, spending a day on the job, giving talks before civic groups are, therefore, important to the acclimation of disadvantaged and handicapped students to the world of work. Participating in team work projects with other students; pairing with a slower or faster learning peer; pairing with a nonhandicapped, a nondisadvantaged, or person from another race or culture will help foster understanding and promote learning communication skills. Teaching special units dealing with related communication and social skills will also be necessary; for example: office etiquette, relationships with employer and other employees, daily work expectations which are not direct task performance, telephone skills, appropriate dress and grooming habits, to name a few.

LISTENING (explaining, discussing, reacting orally). Learning by listening is an important tool to the disadvantaged, the visually impaired, speech impaired, learning disabled, and others who "prefer to be told" or "have to be told" rather than read about it.

The visually impaired require identification of familiar sounds in the work place to determine location of different work areas, equipment functions, and hazards. The hearing impaired require sight substitutions, such as indicator lights, for critical sounds they cannot hear. They may use lip reading, interpreting, and sound conduction or amplification devices. The retarded need to become accustomed to the sounds of the work place so that they can work without being distracted. The speech impaired need to be accorded the right to listen although they may have trouble participating, or not be able to participate orally.

When information is presented for listening, instruction in how to listen (what to listen for) is important. An outline of the information presented, supplemented by visuals, tryout exercises, showing, completion

of a guidesheet questions to be answered, analysis of cases or problem situations, or other application activities will enhance use and retention of information heard.

Listening is a vocational skill as well as a learning skill. Workers must be able to receive information by listening as well as provide information for listening. Most on-the-job instruction is given orally. Explanation must be given to and received from customers, co-workers, and supervisors.

READING HELPS. Being fluent in the technical vocabulary or language of the job and able to read at the level required by the job is a part of occupational competency. On-the-job reading requirements may vary from the reading of signs to following instructions given in technical manuals. The instruction given in reading, then, for vocational purposes, will depend on the reading skills possessed by the student and the reading requirements of the job. Whether or not a supplemental class in remedial reading is offered, the vocational instructor will find providing reading helps also helps provide job skill.

Braille materials, large print textbooks, magnifying devices, and recordings may be provided for the visually impaired. Materials may be simplified or outlined for the hearing impaired and others with limited language skills. The native language may be supplied above the English for critical information in textbooks used by the limited English-speaking. Familiarity with the setting in which the printed information is applied may be given via field trips, demonstrations, or films to make reading easier and more meaningful.

Students with exceptional reading problems may require the help of a special reading teacher or be enrolled in a remedial reading program. Some schools employ vocational reading teachers to assist vocational students with developing vocational reading skills and doing the reading required in their programs.

RECORDING AND RECORDINGS (tapes, records, radio programs). Information may be presented and gained by listening to recorded information rather than reading. This strategy will aid the nonreader, the poor reader, the visually impaired, the learning disabled, and others through use as a variation of teaching technique. Recording is also a useful tool for the deaf in notetaking; the recording script may be transcribed into print later by a hearing individual. It will also provide instruction for those who have missed initial classroom presentation of information or who need review. Recordings may be supplemented by slides and pictures.

RELATED MATH. Competency in math, like competency in reading, is more critical to some jobs than to others. Math is best taught in relation to the task of which it is a part. This instruction should incorporate basic math and remedial math instruction as needed. A cooperative or team teaching effort with the math teachers or related math instructors in the school will relieve the burden on the vocational instructor. Enough practice and application exercises should be provided to insure retention of the math operations involved. It is helpful to compile a list of the

math competencies needed to complete the training program, prepare an assessment test to determine student skills, and plan in the beginning a program which the student can follow to attain the basic math competencies prerequisite to the course. If the skills cannot be acquired simultaneously to the job skill training program, the student should postpone entry into the course until the prerequisite skills are attained. It may be necessary to prepare a special manual and modules to provide the related math instruction.

REMEDIAL AND RETENTION EXERCISES. Doing learning activities does not necessarily make students occupationally competent. Performance must be observed, misunderstandings clarified, procedures and techniques corrected, and repetition called for at future time. Lesson planning should anticipate theory and tasks with which students are likely to have difficulty, include additional practice exercises, and provide alternate approaches to teaching. Repetition for retention should be provided, such as repetition of information in different media presentations or use of different types of application exercises. Review sessions, keeping notebooks, completing work samples, doing live work, and solving cases will also help.

SAFETY. The Occupational Health and Safety Act has increased employer concern for safety and underscored the importance of providing safety instruction along with task performance. It is especially important for the handicapped in two ways: (1) to overcome employer concern about the handicapped person's ability to take care of himself/herself and not endanger the lives of others; (2) to identify and deal with situations which are hazardous for persons because of particular handicaps.

To meet these needs for safety instruction, the handicapped student not only needs the basic or general safety instruction related to the occupation but safety instruction or special safety provisions needed for a person with his/her particular handicap. An example is the installation of a blinking light to tell a person who is deaf that equipment is running.

NOTE: The Kentucky Department of Labor, Occupational Safety and Health Program, Division of Education and Training, Frankfort, Kentucky 40601, Phone: (502) 564-6895, offers training programs to help vocational instructors teach safety.

SUPPORT SERVICES. Some students will require emotional, social, and financial support in order to succeed in the instructional programs. Others will need career counseling and special assistance in becoming employed. Government agencies, special schools, special personnel, and organizations for disadvantaged and handicapped persons can provide this help. The following are examples and should not be considered an all-inclusive list: resource room teachers, rehabilitation counselors, guidance counselors, tutors, remedial teachers, instructors in special schools, occupational therapists, diagnostic specialists, media personnel, handicapped workers, workers who are members of a minority group, social workers, and others who can serve as role models. Survey the community to identify who serves the needs of disadvantaged and handicapped persons in your area and incorporate their assistance in related learning activities.

UNIQUE MODIFICATIONS (modified equipment, tools, learning aids, changes in work environment, adaptations in course or training program content). Some students require special help in meeting physical job requirements. When considering modification, it is important to concentrate on what the student can do. If at all possible, enable the student to function in the work environment as it is usually found. Employers look favorably on handicapped persons with this kind of preparation.

Rehabilitation centers; organizations and schools for the blind, deaf, dyslectic, disabled, and the mentally handicapped; and publishers and manufacturers of special instructional materials, aids, and equipment can offer aid in meeting unique needs. Consultation with special education personnel and rehabilitation counselors is a good starting point. The student should also be asked to make suggestions.

Care should be taken to insure occupational competency. Prospective employers should be shown how the modification operates in the work setting and how it increases efficiency.

The previously described list of strategies is not exhaustive. Others may be added. All will need to be directed toward the occupation for which training is being given, the students enrolled, the availability of instructional materials, and the community. It is also important to remember that what works well for one group of students or a particular student will not necessarily work well for another.

INSTRUCTOR'S GUIDE

TO

LEARNING ACTIVITIES

Instructor's Guide Sheets

Master Copies of the Instructor's Final Checklist

Master Copies of the Check-Out Activity Sheets

Answer Keys for Check-Out Activity Sheets

LEARNING ABOUT RADIOLOGY CAREERS

OBJECTIVE

Given a test about radiology careers, answer the questions. The test must be completed with 100% accuracy.

CONTENTS OF MODULE

<u>Instruction Sheet</u>	<u>Learning Activity Number</u>
I CAREERS IN RADIOLOGY.....	1
<u>Student Self-Check</u>	
I CAREERS IN RADIOLOGY.....	2
<u>Instructor's Final Checklist</u>	
LEARNING ABOUT RADIOLOGY CAREERS.....	4
 CHECK-OUT ACTIVITY	
Obtain a copy of the Check-Out Activity Sheet, LEARNING ABOUT RADIOLOGY CAREERS, from your instructor. Complete the test and return it to your instructor for evaluation.	
<u>Check-Out Activity Sheet</u>	
LEARNING ABOUT RADIOLOGY CAREERS.....	4
LEARNING ABOUT RADIOLOGY CAREERS--ANSWER KEY.....	4

LEARNING ABOUT RADIOLOGY CAREERS

LA#	NOTES AND SUGGESTIONS FOR INSTRUCTION	REFERENCES AND SPECIAL TOOLS AND EQUIPMENT	TEACHER'S NOTES
1	You may want to show an audio-visual material about careers in radiology.		
2	Student Self-Check		
3	Check each student's chart showing the organization and personnel employed in the radiology department.		
4	Provide a copy of the test for each student. Check their answers using the Answer Key provided. Use the Instructor's Final Checklist to check each student's performance.	--Copies of the Check-Out Activity Sheet, LEARNING ABOUT RADIOLOGY CAREERS. (A Master Copy and an Answer Key are provided in this section of the manual.) --Copies of the Instructor's Final Checklist. (A Master Copy is provided in this section of the manual.)	

CHECK-OUT ACTIVITY SHEET

LEARNING ABOUT RADIOLOGY CAREERS

Directions: Complete the following exercise and return it to your instructor for evaluation.

1. _____ is the process of making X-ray pictures.
2. A _____ is a physician who specializes in the use of X-rays.
3. Name three areas of radiologic technology.
4. A radiologic technology program must be approved by the _____.
5. The radiologic technology program is _____ in length.
6. The _____ registers a radiologic technologist when the requirements are met.
7. What is the responsibility of the radiologic or radiographic aide?

CHECK-OUT ACTIVITY SHEET

LEARNING ABOUT RADIOLOGY CAREERS

ANSWER KEY

1. Radiography
2. Radiologist
3. --X-ray technology
--nuclear medicine technology
--radiation therapy
4. American Medical Association
5. two to four years
6. American Registry of Radiologic Technologists
7. To assist the radiologic technologist in preparing patients for X-rays and in following the radiographic procedures.

INSTRUCTOR'S FINAL CHECKLIST

LEARNING ABOUT RADIOLOGY CAREERS

The student should be evaluated according to the performance ratings in the box. Indicate on a separate sheet of paper whether the student's performance for each item is Fully Accomplished, Partially Accomplished, Not Accomplished, or under certain circumstances, Not Applicable.

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated Not Accomplished or Partially Accomplished, the student and instructor will decide which learning activities must be repeated.

Fully Accomplished	Partially Accomplished	Not Accomplished	Not Applicable
-----------------------	---------------------------	---------------------	-------------------

The student completed the Check-Out Activity Sheet, LEARNING ABOUT RADIOLOGY CAREERS, with 100% accuracy.....

[] [] [] [] []

ASSISTING THE PATIENT WITH THE BEDPAN/URINAL

OBJECTIVES

- (1) Provided a patient and access to the necessary equipment and supplies, assist the patient in using a bedpan. The procedure will be evaluated in accordance with the Instructor's Final Checklist. All items on the checklist must be completed acceptably.
- (2) Provided a male patient and access to the necessary equipment and supplies, assist the patient in using a urinal. The procedure will be evaluated in accordance with the Instructor's Final Checklist. All items on the checklist must be completed acceptably.

CONTENTS OF MODULE

<u>Instruction Sheets</u>	<u>Learning Activity Number</u>
I ASSISTING THE PATIENT WITH ELIMINATION	1
II ASSISTING A PATIENT WITH THE BEDPAN OR URINAL . . .	3
<u>Student Self-Check</u>	
I ASSISTING THE PATIENT WITH ELIMINATION	2
<u>Instructor's Final Checklist</u>	
ASSISTING THE PATIENT WITH THE BEDPAN/URINAL	5

CHECK-OUT ACTIVITIES

- (1) A patient and the necessary equipment and supplies will be provided. Assist the patient in using the bedpan.
- (2) A male patient and the necessary equipment and supplies will be provided. Assist the patient in using a urinal.

ASSISTING THE PATIENT WITH THE BEDPAN/URINAL

LA#	NOTES AND SUGGESTIONS FOR INSTRUCTION	REFERENCES AND SPECIAL TOOLS AND EQUIPMENT	TEACHER'S NOTES
1	You may want to display a bedpan and urinal for the students to view.		
2	Student Self-Check		
3	View an audio-visual material about using the bedpan or urinal, if one is available. You may have the students to read more about assisting the patient with the bedpan or urinal in the recommended reference.	RECOMMENDED REFERENCE Simmers, <u>Diversified Health Occupations</u> , pp. 333-336. Albany, NY: Delmar Publishers, 1983.	
4	Have the students practice assisting a patient with the bedpan and urinal.	--Male mannequin --Urinal --Bedpan --Toilet tissue --Equipment and supplies for patient to use to wash hands	
5	Have the students check out on assisting a patient with the urinal and the bedpan. Use the Instructor's Final Checklist to check each student's performance.	--See list of tools and supplies for LA #4. --Copies of the Instructor's Final Checklist. (A Master Copy is provided in this section of the manual.)	

INSTRUCTOR'S FINAL CHECKLIST

ASSISTING THE PATIENT WITH THE BEDPAN/URINAL

The student should be evaluated according to the performance ratings in the box. Indicate on a separate sheet of paper whether the student's performance for each item is Fully Accomplished, Partially Accomplished, Not Accomplished, or under certain circumstances, Not Applicable.

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated Not Accomplished or Partially Accomplished, the student and instructor will decide which learning activities must be repeated.

Fully Accomplished	Partially Accomplished	Not Accomplished	Not Applicable
-----------------------	---------------------------	---------------------	-------------------

(1) In assisting a patient in using a bedpan, the student:

- | | | | | |
|--|-----|-----|-----|-----|
| a. Assembled the necessary equipment | [] | [] | [] | [] |
| b. Washed hands | [] | [] | [] | [] |
| c. Explained the procedure and saw to the patient's needs throughout the procedure | [] | [] | [] | [] |
| d. Placed the patient on the bedpan properly | [] | [] | [] | [] |
| e. Did not leave the patient | [] | [] | [] | [] |
| f. Assisted the patient in cleansing genital/rectal areas, as necessary | [] | [] | [] | [] |
| g. Observed sanitary procedures for self, patient, and equipment | [] | [] | [] | [] |
| h. Told supervisor that patient had defecated and/or urinated | [] | [] | [] | [] |

(2) In administering the urinal to a male patient, the student:

- | | | | | |
|---|-----|-----|-----|-----|
| a. Assembled the necessary equipment | [] | [] | [] | [] |
| b. Washed hands | [] | [] | [] | [] |
| c. Explained the procedure and saw to the patient's needs throughout the procedure. | [] | [] | [] | [] |
| d. Gave urinal to patient or, if patient was unable, placed urinal in proper position | [] | [] | [] | [] |
| e. Observed sanitary procedures for self, patient, and equipment | [] | [] | [] | [] |
| f. Told supervisor that patient had urinated | [] | [] | [] | [] |

PREPARING THE OUTPATIENT FOR RADIOGRAPHIC EXAMINATIONS

OBJECTIVE

Given an outpatient scheduled for a radiographic study, prepare the patient. Your performance will be rated by the Instructor's Final Checklist. All items on the checklist must be fully accomplished.

CONTENTS OF MODULE

<u>Instruction Sheet</u>	<u>Learning Activity Number</u>
I PREPARING THE OUTPATIENT.....	1
 <u>Instructor's Final Checklist</u>	
PREPARING THE OUTPATIENT FOR RADIOGRAPHIC EXAMINATIONS.....	4

CHECK-OUT ACTIVITY

Your instructor will assign you an outpatient. Prepare the patient for a radiographic examination.

PREPARING THE OUTPATIENT FOR RADIOGRAPHIC EXAMINATIONS

LA#	NOTES AND SUGGESTIONS FOR INSTRUCTION	REFERENCES AND SPECIAL TOOLS AND EQUIPMENT	TEACHER'S NOTES
1			
2	Obtain copies of the clinical facility's outpatient procedures.		
3	Students may wish to prepare a performance checklist for use in practicing preparing the patient for radi- ographic procedures. The checklist should include all steps involved in the process.		
4	You will need copies of the facility's procedures and policies on out- patients for checking out the students. Use the Instructor's Final Checklist to check each student's performance.	--Patient --Draw sheet --Copies of the Instruc- tor's Final Checklist. (A Master Copy is provided in this section of the manual.)	

INSTRUCTOR'S FINAL CHECKLIST

PREPARING THE OUTPATIENT FOR RADIOGRAPHIC EXAMINATIONS

The student should be evaluated according to the performance ratings in the box. Indicate on a separate sheet of paper whether the student's performance for each item is Fully Accomplished, Partially Accomplished, Not Accomplished, or under certain circumstances, Not Applicable.

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated Not Accomplished or Partially Accomplished, the student and instructor will decide which learning activities must be repeated.

Fully Accomplished	Partially Accomplished	Not Accomplished	Not Applicable
-----------------------	---------------------------	---------------------	-------------------

In preparing the outpatient for a radiographic examination, the student:

- | | | | | |
|--|-----|-----|-----|-----|
| a. Greeted the patient..... | [] | [] | [] | [] |
| b. Identified the patient by name..... | [] | [] | [] | [] |
| c. Informed the patient about which items of clothing and metal items were to be removed..... | [] | [] | [] | [] |
| d. Escorted the patient to the dressing room..... | [] | [] | [] | [] |
| e. Explained how the examination gown should be put on..... | [] | [] | [] | [] |
| f. Helped the patient disrobe, if necessary..... | [] | [] | [] | [] |
| g. Explained what the patient was to do when properly dressed in gown..... | [] | [] | [] | [] |
| h. Explained what the patient should do with his/her clothing and valuables according to facility's policies and procedures..... | [] | [] | [] | [] |
| i. Escorted the patient to the radiographic room..... | [] | [] | [] | [] |
| j. Escorted patient back to dressing room when the procedure was completed..... | [] | [] | [] | [] |
| k. Assisted the patient to dress, if necessary..... | [] | [] | [] | [] |
| l. Demonstrated courtesy and professionalism to the patient..... | [] | [] | [] | [] |
| m. Followed the facility's procedures and policies..... | [] | [] | [] | [] |

MAINTAINING THE RADIOGRAPHIC ROOM

OBJECTIVE

Given the necessary equipment and supplies, clean and maintain a radiographic room. Your performance will be rated by the Instructor's Final Checklist. All items on the checklist must be fully accomplished.

CONTENTS OF MODULE

Instruction SheetLearning
Activity Number

I MAINTAINING THE RADIOGRAPHIC ROOM..... 1

Instructor's Final Checklist

MAINTAINING THE RADIOGRAPHIC ROOM..... 6

CHECK-OUT ACTIVITY

Your instructor will assign you a radiographic room needing routine maintenance. Clean and maintain the room and the equipment.

MAINTAINING THE RADIOGRAPHIC ROOM

LA#	NOTES AND SUGGESTIONS FOR INSTRUCTION	REFERENCES AND SPECIAL TOOLS AND EQUIPMENT	TEACHER'S NOTES
1	You may need to compile a list of radiology department terms and abbreviations for the students to learn, if it is pertinent to job efficiency.		
2	Have each student make a performance checklist so that he/she will not forget any step in the procedures for maintaining the radiographic rooms.		
3	Have the student list each piece of equipment in the radiographic room. Check each student's list.		
4	Manufacturers' directions are usually kept in a manual in the radiographic office. You may wish to copy the directions for student reference.		
5	Have the students practice maintaining the radiographic room.	--Cloths --Disinfecting product --Bucket	
6	Have the students check out on maintaining the radiographic room. Use the Instructor's Final Checklist to check each student's performance.	--Cloths --Disinfecting product --Bucket --Copies of the Instructor's Final Checklist. (A Master Copy is provided in this section of the manual.)	

INSTRUCTOR'S FINAL CHECKLIST

MAINTAINING THE RADIOGRAPHIC ROOM

The student should be evaluated according to the performance ratings in the box. Indicate on a separate sheet of paper whether the student's performance for each item is Fully Accomplished, Partially Accomplished, Not Accomplished, or under certain circumstances, Not Applicable.

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated Not Accomplished or Partially Accomplished, the student and instructor will decide which learning activities must be repeated.

Fully Accomplished	Partially Accomplished	Not Accomplished	Not Applicable
-----------------------	---------------------------	---------------------	-------------------

In maintaining the radiographic room and the equipment, the student:

- | | | | | |
|--|-----|-----|-----|-----|
| a. Damp dusted the tabletop..... | [] | [] | [] | [] |
| b. Cleaned the tabletop with a disinfectant after an infectious case was examined..... | [] | [] | [] | [] |
| c. Dusted and cleaned tube stands, fluoroscopic assembly, and stools..... | [] | [] | [] | [] |
| d. Polished metallic parts..... | [] | [] | [] | [] |
| e. Did not use water on the electrical portions of the unit..... | [] | [] | [] | [] |
| f. Cleaned the cassette fronts with disinfectant-dampened cloths..... | [] | [] | [] | [] |
| g. Covered the holders and cassettes with clean toweling..... | [] | [] | [] | [] |
| h. Cleaned the film holders thoroughly..... | [] | [] | [] | [] |
| i. Disinfected the film holders..... | [] | [] | [] | [] |
| j. Changed towels, pillowcases, and sheets..... | [] | [] | [] | [] |
| k. Used a deodorizing spray as necessary..... | [] | [] | [] | [] |
| l. Maintained a comfortable temperature range..... | [] | [] | [] | [] |
| m. Wiped up spills on the floor..... | [] | [] | [] | [] |
| n. Checked the room for hazards..... | [] | [] | [] | [] |
| o. Followed the facility's policies and procedures for maintaining the radiographic rooms..... | [] | [] | [] | [] |

KY8313308

HEALTH SERVICES: CLINICAL

RADIOGRAPHIC AIDE

INSTRUCTOR'S PACKAGE

MODULES HS-RA 1-4

STUDENT PACKAGE

Kentucky Department of Education
Printed With State Funds

Health Services: Clinical

LEARNING ABOUT RADIOLOGY CAREERS

INTRODUCTION

Rapid advances in basic and applied sciences are contributing to the increase of personnel employed in radiology. Employment in the field of radiology is expected to expand through the mid-1980s as X-ray equipment is increasingly used to diagnose and treat diseases. In this module, you will learn about the different career opportunities in radiology.

DIRECTIONS

Read the objective below. If you think that you are already able to perform the task, read the Check-Out Activity on the back cover. Then either arrange with your instructor about doing the Check-Out Activity,

or

If you need to complete learning activities in order to be able to do the task, find the Learning Activities inside this module and go through them in the order in which they are listed.

OBJECTIVE

Given a test about radiology careers, answer the questions. The test must be completed with 100% accuracy.

LEARNING ACTIVITIES

1. READ and STUDY Instruction Sheet I, CAREERS IN RADIOLOGY.
(or) _____
2. COMPLETE Student Self-Check I, CAREERS IN RADIOLOGY.
3. DRAW a chart showing the organization and personnel employed in your radiology department. HAVE your supervisor check your work for completeness and accuracy.
4. ARRANGE with your instructor to complete this module by going through the CHECK-OUT ACTIVITY listed on the back cover.

INSTRUCTION SHEET I

CAREERS IN RADIOLOGY*

Radiology is defined as the branch of medicine concerned with radioactive substances--such as X-rays, radioactive isotopes, and ionizing radiations--and the application of information to prevent, diagnose, and treat disease. Radiography is the process of making X-ray pictures. A radiologist is a physician who has completed a residency in radiology; that is, he/she specializes in the use of X-rays.

Radiologic technologists are persons who operate X-ray equipment and take X-ray pictures (known as radiographs). They usually work under the supervision of radiologists. Radiologic technologists may work in the three specialties of radiologic technology: X-ray technology, nuclear medicine technology, and radiation therapy. X-ray technology involves taking X-rays of parts of the human body for study by a radiologist in diagnosing a patient's problem. Nuclear medicine technology is the application of radioactive material to help radiologists diagnose or treat illnesses or injuries. Radiation therapy is the use of radiation-producing machines to give therapeutic treatments recommended by radiologists. Before a radiologic technologist can perform any work on a patient, a physician must issue a requisition ordering the work done. The responsibilities of the radiologic technologist may include the following tasks:

- Prepares patients for X-ray examinations.
- Positions patients for X-ray examinations and surrounds the exposed body parts with radiation protection devices, such as lead plates.
- Positions the X-ray machine at the correct angle and height over the appropriate area of a patient's body.
- Places the X-ray film, turns on the machine, removes the film, and develops it for analysis by a radiologist.
- Prepares patients for fluoroscopy.
- For treating cancer, he/she applies the correct amount of radiation for the proper period of time to the affected part of the patient's body.
- Keeps accurate records of the cancer treatment.
- In nuclear medicine, he/she operates instruments that measure the intensity of radioactivity in the patient's diseased organs.
- Prepares and maintains patients' records.
- Maintains files.
- Schedules appointments.
- Prepares work schedules for assistants.
- Teaches X-ray techniques in programs of radiologic technology.

To become a radiologic technologist, you must complete a formal education program in radiologic technology. This program must be approved by the American Medical Association (AMA). Programs vary in length from two to four years. Programs are offered by hospitals and medical schools affiliated with hospitals, colleges, and universities. Education may also be obtained in the military service or through courses in radiologic technology offered by vocational or technical schools.

INSTRUCTION SHEET 1, (page 2)

Registration with the American Registry of Radiologic Technologists is an asset in obtaining highly skilled and specialized positions. Registration requirements include graduation from an approved program of medical radiologic technology and the satisfactory completion of a written examination. After registration, the title "Registered Technologist (ARRT)" may be used. Once registered, technologists may be certified in radiation therapy or nuclear medicine by completing an additional year of combined classroom study and clinical education.

The radiologic or radiographic aide assists the radiologic technologist in preparing patients for X-rays and in following the radiographic procedures.

*Adapted from the Occupational Outlook Handbook, 1978-79 Edition, Bureau of Labor Statistics, Bulletin 1955. Washington, D.C.: Superintendent of Documents, U.S. Government Printing Office, 1978.

STUDENT SELF-CHECK I

CAREERS IN RADIOLOGY

Directions: Answer the following questions on a separate sheet of paper. Check your answers against those provided on page 6.

1. Who supervises the radiologic technologist?
2. What is the basic responsibility of the radiologic technologist?
3. What agency or organization must approve a radiologic technology program?
4. Where are programs offered?
5. What agency or organization registers the radiologic technologist when he/she completes the requirements?

STUDENT SELF-CHECK I

CAREERS IN RADIOLOGY

ANSWER KEY

1. Radiologist
2. To operate X-ray equipment and take radiographs
3. American Medical Association
4. --Hospitals
--Medical schools affiliated with hospitals, colleges, and universities
--Military service
--Vocational or technical school
5. American Registry of Radiologic Technologists

INSTRUCTOR'S FINAL CHECKLIST

LEARNING ABOUT RADIOLOGY CAREERS

The student should be evaluated according to the performance ratings in the box. Indicate on a separate sheet of paper whether the student's performance for each item is Fully Accomplished, Partially Accomplished, Not Accomplished, or under certain circumstances, Not Applicable.

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated Not Accomplished or Partially Accomplished, the student and instructor will decide which learning activities must be repeated.

Fully Accomplished	Partially Accomplished	Not Accomplished	Not Applicable
-----------------------	---------------------------	---------------------	-------------------

The student completed the Check-Out Activity Sheet, LEARNING ABOUT RADIOLOGY CAREERS, with 100% accuracy.....

[] [] [] [] []

CHECK-OUT ACTIVITY

The statements below explain the activity you must be able to complete in order to finish this module. As you go through the activity, your instructor will rate your performance using the Instructor's Final Checklist, **LEARNING ABOUT RADIOLOGY CAREERS**.

Obtain a copy of the Check-Out Activity Sheet, **LEARNING ABOUT RADIOLOGY CAREERS**, from your instructor. Complete the test and return it to your instructor for evaluation.

Health Services: Clinical

ASSISTING THE PATIENT WITH THE BEDPAN/URINAL

INTRODUCTION

Many patients scheduled for radiographic procedures will need assistance with elimination while they are in the radiology department. In this module, you will learn to assist the patient in the comfortable use of the bedpan and/or urinal.

DIRECTIONS

Read the objectives below. If you think that you are already able to perform these tasks, read the Check-Out Activities on the back cover. Then either arrange with your instructor about doing the Check-Out Activities,

or

If you need to complete learning activities in order to be able to do the tasks, find the Learning Activities inside this module and go through them in the order in which they are listed.

OBJECTIVES

- (1) Provided a patient and access to the necessary equipment and supplies, assist the patient in using a bedpan. The procedure will be evaluated in accordance with the Instructor's Final Checklist. All items on the checklist must be completed acceptably.
- (2) Provided a male patient and access to the necessary equipment and supplies, assist the patient in using a urinal. The procedure will be evaluated in accordance with the Instructor's Final Checklist. All items on the checklist must be completed acceptably.

VOCABULARY

Defecating--evacuating the bowels.

Perineal--pertaining to the external region between the vulva and anus in a female or between the scrotum and anus in a male.

LEARNING ACTIVITIES

1. READ Instruction Sheet I, ASSISTING THE PATIENT WITH ELIMINATION.
(or) _____
2. CHECK YOUR KNOWLEDGE of assisting a patient with elimination by taking Student Self-Check I, ASSISTING THE PATIENT WITH ELIMINATION.
3. READ Instruction Sheet II, ASSISTING A PATIENT WITH THE BEDPAN OR URINAL.
(or) _____
4. PRACTICE the procedures for placing a patient on a bedpan and positioning a urinal for a patient. (USE a male mannequin as your patient.)
5. ARRANGE with your instructor to complete this module by going through the CHECK-OUT ACTIVITIES on the back cover.

INSTRUCTION SHEET 1

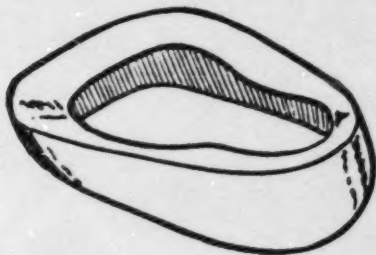
ASSISTING THE PATIENT WITH ELIMINATION

Patients who must be dependent upon you for elimination utensils may have feelings of embarrassment and even shame. It is very important that you relieve these feelings of embarrassment. Respect the patient's privacy throughout the procedure. The patient should also be encouraged to do as much as possible for himself/herself, but assistance should be ready if needed.

Be prompt in assisting the patient with elimination so the patient does not have to wait. Waiting weakens the tone of the sphincter muscles in the urethra and the rectum, as well as causes the patient physical and emotional stress. If assistance is delayed, the patient may become impatient, try to make it to the bathroom, fall, and possibly become injured.

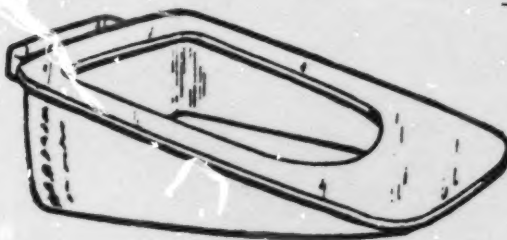
Types of Elimination Utensils

Bedpan:



- Used by a male patient for defecating.
- Used by a female for both defecating and urinating.

Fracture Bedpan:



- Used when patients are unable to sit on a regular-sized bedpan.

INSTRUCTION SHEET 1, (page 2)

Urinal:



--Used mainly by male patients for urinating. There are female urinals available in some hospitals. Check with your agency concerning the types of urinals used.

STUDENT SELF-CHECK I

ASSISTING THE PATIENT WITH ELIMINATION

Directions: On a separate sheet of paper, complete the following sentences. After you are finished, compare your answers with those provided on page 9.

1. The use of elimination utensils is an _____ situation for the patient.
2. Be _____ in assisting the patient with elimination so the patient does not have to wait.
3. A _____ is used by a male patient for defecating and a female patient for both defecating and urinating.
4. A urinal is used mainly by male patients for _____.
5. A _____ is used when the patient is unable to sit on a regular-sized bedpan.

INSTRUCTION SHEET II

ASSISTING A PATIENT WITH THE BEDPAN OR URINAL

To assist a patient with the bedpan or urinal, follow the procedures listed below:

1. Assemble the necessary equipment:
 - Clean bedpan (labeled, if appropriate)
 - Clean urinal (labeled, if appropriate)
 - Toilet tissue
 - Aerosol air freshener (optional)
 - Equipment for patient to wash and dry hands
2. Identify the patient and explain the procedure.
3. Provide for the patient's privacy.
4. Wash your hands.
5. Pie-fold the linen off the patient in order to position the bedpan or urinal properly. Avoid unnecessary exposure of the patient. If the patient has no covering, obtain a clean sheet and place over the patient.
6. Position the bedpan or urinal.
 - a. Bedpan
 - (1) If the patient needs assistance, instruct the patient to bend his/her knees and try to rest some of his/her weight on the heels. Lift the patient by placing one hand under the patient's lower back and, with your other hand, slip the pan in place.
 - (2) If the patient is helpless, place the patient on his/her side and position the bedpan against the patient's buttocks. Then roll the patient back onto the bedpan.
 - NOTE: The bedpan is positioned properly when the patient's buttocks rest on the rounded shelf of the bedpan.
 - b. A urinal is placed between the slightly spread legs with the flat side of the urinal on the bed.
7. Replace the top linens or the sheet you have obtained to cover the patient.
8. Do not leave the patient because he/she may fall if poorly balanced on the bedpan.
9. When the patient has defecated or urinated, remove the bedpan/urinal in the reverse procedure.

INSTRUCTION SHEET II, (page 2)

10. After elimination, properly clean the patient in order to prevent perineal irritations or infections. This may be done by the patient or if the patient is unable, you should carry out this procedure. To clean the patient after elimination:
 - a. Wrap toilet tissue around your hand several times.
 - b. Wipe the patient clean. On a female patient, wipe from the vulva across the vaginal opening to the rectum. This method of wiping will prevent rectal bacteria from contaminating the vaginal opening.
 - c. Discard toilet tissue properly. Do not place toilet tissue in the bedpan if a specimen is ordered.

NOTE: This procedure must be done in a matter-of-fact way to avoid embarrassment for the patient. Minimal exposure will also relieve feelings of embarrassment.

11. Cover the patient with the bed linens or the sheet.
12. Discard the stool and/or urine. If a specimen is ordered or if intake and output are ordered, contact your supervisor before you discard the specimen.
13. Offer the patient equipment and supplies to wash his/her hands.
14. Provide for the patient's comfort.
15. Clean the bedpan or urinal according to the facility policy.
16. Tell your supervisor that the patient has urinated and/or defecated.

STUDENT SELF-CHECK I

ASSISTING THE PATIENT WITH ELIMINATION

ANSWER KEY:

1. embarrassing
2. prompt
3. bedpan
4. urinating
5. fracture bedpan

INSTRUCTOR'S FINAL CHECKLIST

ASSISTING THE PATIENT WITH THE BEDPAN/URINAL

The student should be evaluated according to the performance ratings in the box. Indicate on a separate sheet of paper whether the student's performance for each item is Fully Accomplished, Partially Accomplished, Not Accomplished, or under certain circumstances, Not Applicable.

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated Not Accomplished or Partially Accomplished, the student and instructor will decide which learning activities must be repeated.

Fully Accomplished	Partially Accomplished	Not Accomplished	Not Applicable
-----------------------	---------------------------	---------------------	-------------------

(1) In assisting a patient in using a bedpan, the student:

- | | | | | |
|--|-----|-----|-----|-----|
| a. Assembled the necessary equipment | [] | [] | [] | [] |
| b. Washed hands | [] | [] | [] | [] |
| c. Explained the procedure and saw to the patient's needs throughout the procedure | [] | [] | [] | [] |
| d. Placed the patient on the bedpan properly | [] | [] | [] | [] |
| e. Did not leave the patient | [] | [] | [] | [] |
| f. Assisted the patient in cleansing genital/rectal areas, as necessary | [] | [] | [] | [] |
| g. Observed sanitary procedures for self, patient, and equipment | [] | [] | [] | [] |
| h. Told supervisor that patient had defecated and/or urinated | [] | [] | [] | [] |

(2) In administering the urinal to a male patient, the student:

- | | | | | |
|---|-----|-----|-----|-----|
| a. Assembled the necessary equipment | [] | [] | [] | [] |
| b. Washed hands | [] | [] | [] | [] |
| c. Explained the procedure and saw to the patient's needs throughout the procedure. | [] | [] | [] | [] |
| d. Gave urinal to patient or, if patient was unable, placed urinal in proper position | [] | [] | [] | [] |
| e. Observed sanitary procedures for self, patient, and equipment | [] | [] | [] | [] |
| f. Told supervisor that patient had urinated | [] | [] | [] | [] |

CHECK-OUT ACTIVITIES

The statements below explain the activities you must be able to complete in order to finish this module. As you go through each activity, your instructor will rate your performance using the Instructor's Final Checklist, ASSISTING THE PATIENT WITH THE BEDPAN/URINAL.

- (1) A patient and the necessary equipment and supplies will be provided. Assist the patient in using the bedpan.
- (2) A male patient and the necessary equipment and supplies will be provided. Assist the patient in using a urinal.

Health Services: Clinical

PREPARING THE OUTPATIENT FOR RADIOGRAPHIC EXAMINATIONS

INTRODUCTION

Many outpatients are scheduled for procedures in the radiology department. In this module, you will learn how to prepare patients for radiographic studies.

DIRECTIONS

Read the objective below. If you think that you are already able to perform the task, read the Check-Out Activity on the back cover. Then either arrange with your instructor about doing the Check-Out Activity,

or

If you need to complete learning activities in order to be able to do the task, find the Learning Activities inside this module and go through them in the order in which they are listed.

OBJECTIVE

Given an outpatient scheduled for radiographic study, prepare the patient. Your performance will be rated by the Instructor's Final Checklist. All items on the checklist must be fully accomplished.

LEARNING ACTIVITIES

1. READ Instruction Sheet I, PREPARING THE OUTPATIENT.
(or) _____
2. OBTAIN copies of your clinical facility's procedures for the outpatient.
STUDY the procedures.
(or) _____
3. PRACTICE preparing outpatients for radiographic procedures.
4. ARRANGE with your instructor to complete this module by going through the CHECK-OUT ACTIVITY on the back cover.

INSTRUCTION SHEET 1

PREPARING THE OUTPATIENT

Many doctors' offices and other outside agencies routinely schedule patients for radiographic examinations. You, the radiographic aide, will usually be the one who has first contact with the patient in the radiology department. Be certain to demonstrate courtesy and professionalism to the patient. Remember the patient may be embarrassed about the procedure or may be in some degree of discomfort. The general steps you should take in preparing the patient for a radiographic procedure are listed below. Your clinical facility may have more specific policies and procedures.

1. Greet the patient.
2. Identify the patient by name.
3. Inform the patient about which items of clothing and metal items, such as jewelry, should be removed.
4. Escort the patient to the dressing room.
5. Explain how the examination gown should be put on.
6. Help the patient disrobe, if necessary.
7. Explain what the patient is to do when properly dressed in the examination gown.
8. Explain what the patient should do with his/her clothing and valuables according to the facility's policies and procedures.
9. Escort the patient to the radiographic room.
10. Escort the patient back to dressing room once the procedure is completed.
11. Assist the patient to dress, if necessary.
12. Follow the facility's policies and procedures at all times.

The dressing rooms in most radiology departments are not safe, secure areas to leave clothing and other valuables. You should explain precisely what the patient is to do with clothing and other valuables. Jewelry and other metal items must not be worn for certain radiographic examinations. Ask the patient to remove any metal items that will interfere with the examination. Some agencies request that the patient carry his/her billfold, purse, or other valuables. If the items are not to be carried by the patient, be sure and follow the facility's policies and procedures exactly. Remember that each article of clothing, jewelry, or any other type of personal effects that a patient brings or wears is valuable and should be treated as such.

INSTRUCTION SHEET 1, (page 2)

Commonly, the radiology patient will arrive at the department alone. Observe the patient's condition. It may be necessary to assist the patient in removing clothing. Your assistance will prove valuable to the patient who is in a cast or a brace, is in a weakened condition, or is extremely young. Offer your assistance and stay near the dressing room in the event that help is needed. A very young patient will usually be more relaxed and cooperative if a parent assists in the dressing and undressing. In this event, explain to the adult how the child is to be dressed and what is to be done after the patient is properly attired.

In the event that you have a patient who has a paralyzed leg or some type of hip disability, remove the clothing from the top part of the body first. Place a long examination gown on the patient. Have the patient loosen belt buckles, buttons, and hooks that are around the waist. The clothing can then be slipped over the hips by the patient. If the patient is unable to accomplish this procedure, you may assist. Once the clothing has been pulled down over the hips, the patient can sit down. Gently pull the clothing over the patient's legs and feet until the clothing is completely removed.

If a dress cannot be removed in this manner, then the dress must be pulled over the head. Remember to place a draw sheet over the patient before helping the patient remove her slip and bra. Assist the patient in putting on the examination gown. You may then remove the draw sheet.

Once the procedure is completed, it may be necessary to assist the patient in redressing. In the case of a patient with a leg injury, brace, or cast, slide the clothing over the feet and legs as far as the hips. The patient should still be in the examination gown and in a sitting position. Have the patient stand and pull the clothing over the hips. If the patient is unable to perform this procedure, an assistant should raise the patient off the chair so that the clothing may be pulled over the hips and up to the waist. Next remove the arms from the sleeves of the gown and carefully pull the clothing over the head or place the arms in the sleeves one at a time. Remove the gown when all the outside items of clothing are in place.

In the event that the patient who has an arm injury needs assistance, remember to remove the clothing from the unaffected side first. Using a clean gown or a draw sheet, remove the clothing from the affected side. Put the examination gown on the affected side first. Remember, do not leave a patient unnecessarily exposed.

INSTRUCTOR'S FINAL CHECKLIST

PREPARING THE OUTPATIENT FOR RADIOGRAPHIC EXAMINATIONS

The student should be evaluated according to the performance ratings in the box. Indicate on a separate sheet of paper whether the student's performance for each item is Fully Accomplished, Partially Accomplished, Not Accomplished, or under certain circumstances, Not Applicable.

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated Not Accomplished or Partially Accomplished, the student and instructor will decide which learning activities must be repeated.

Fully Accomplished	Partially Accomplished	Not Accomplished	Not Applicable
-----------------------	---------------------------	---------------------	-------------------

In preparing the outpatient for a radiographic examination, the student:

- | | | | | | |
|--|-----|-----|-----|-----|-----|
| a. Greeted the patient..... | [] | [] | [] | [] | [] |
| b. Identified the patient by name..... | [] | [] | [] | [] | [] |
| c. Informed the patient about which items of clothing and metal items were to be removed..... | [] | [] | [] | [] | [] |
| d. Escorted the patient to the dressing room..... | [] | [] | [] | [] | [] |
| e. Explained how the examination gown should be put on..... | [] | [] | [] | [] | [] |
| f. Helped the patient disrobe, if necessary..... | [] | [] | [] | [] | [] |
| g. Explained what the patient was to do when properly dressed in gown..... | [] | [] | [] | [] | [] |
| h. Explained what the patient should do with his/her clothing and valuables according to facility's policies and procedures..... | [] | [] | [] | [] | [] |
| i. Escorted the patient to the radiographic room..... | [] | [] | [] | [] | [] |
| j. Escorted patient back to dressing room when the procedure was completed..... | [] | [] | [] | [] | [] |
| k. Assisted the patient to dress, if necessary..... | [] | [] | [] | [] | [] |
| l. Demonstrated courtesy and professionalism to the patient..... | [] | [] | [] | [] | [] |
| m. Followed the facility's procedures and policies..... | [] | [] | [] | [] | [] |

CHECK-OUT ACTIVITY

The statements below explain the activity you must be able to complete in order to finish this module. As you go through the activity, your instructor will rate your performance using the Instructor's Final Checklist, PREPARING THE OUTPATIENT FOR RADIOGRAPHIC EXAMINATIONS.

Your instructor will assign you an outpatient. Prepare the patient for a radiographic examination.

Health Services: Clinical

MAINTAINING THE RADIOGRAPHIC ROOM

INTRODUCTION

Radiographic rooms are in constant use. Because of the high degree of utilization and because it is a part of the clinical facility, the radiographic room should be scrupulously clean. In this module, you will learn how to maintain the radiographic room.

DIRECTIONS

Read the objective below. If you think that you are already able to perform the task, read the Check-Out Activity on the back cover. Then either arrange with your instructor about doing the Check-Out Activity,

or

If you need to complete learning activities in order to be able to do the task, find the Learning Activities inside this module and go through them in the order in which they are listed.

OBJECTIVE

Given the necessary equipment and supplies, clean and maintain a radiographic room. Your performance will be rated by the Instructor's Final Checklist. All items on the checklist must be fully accomplished.

LEARNING ACTIVITIES

1. READ Instruction Sheet I, MAINTAINING THE RADIOGRAPHIC ROOM.
(or) _____
2. OBSERVE radiology staff members cleaning and maintaining the radiographic rooms.
(or) _____
3. LEARN the name of each piece of radiology equipment in the radiographic rooms. DEMONSTRATE your knowledge of the equipment names by listing each piece of equipment in the radiographic rooms and the use of each. HAVE your instructor check your listing.
(or) _____
4. READ the manufacturers' directions on the maintenance of radiographic equipment.
(or) _____
5. PRACTICE maintaining radiographic rooms.
6. ARRANGE with your instructor to complete this module by going through the CHECK-OUT ACTIVITY on the back cover.

INSTRUCTION SHEET I

MAINTAINING THE RADIOGRAPHIC ROOM

The radiographic rooms in hospitals and clinics are used constantly. Since the rooms are exposed to many different types of contamination from patients, it is vitally important that you, as a radiographic aide, follow the institution's policies and procedures regarding the cleaning and maintenance of the radiographic rooms.

Since each facility's policies, procedures, and equipment may vary tremendously, the following items are only general in nature:

1. Damp dust the tabletop daily. Your institution will probably require you to clean the tabletop with a disinfectant at periodic intervals or between patients. A sheet on the table is necessary when infectious cases are being examined. After an infectious case has used the room, the tabletop should always be disinfected.
2. Dust and clean all of the equipment in the room, such as tube stands, fluoroscopic tower assembly, and stools, daily or as needed.
3. Clean the table sides and other metallic parts with metal polish. Be certain to remove any barium mixture that is spilled.
4. Use a dry cloth to clean the electrical portions of the unit. Do not use water or a dampened cloth to dust these parts.
5. Clean the cassette fronts with a cloth that is dampened with a disinfectant.
6. Cover the cassettes and cardboard holders with towels to protect them from foreign material. However, the film holders should still be disinfected after use. The film holders should be examined daily for cleanliness. Be certain to remove the tape residue that occasionally adheres to the holders.
7. Always change the towels, pillowcases, and sheets after use. Never ask a patient to lie on soiled linens or a dirty table.
8. Remove undesirable odors in the rooms with a nonscented aerosol spray.
9. Remember that most of the patients are clad only in thin examination gowns. Try to maintain a temperature in a range that will be comfortable for the patients.
10. Be sure to wipe any spills that may be on the floor. A wet floor may cause a patient or a technician to slip and be hurt badly.

INSTRUCTION SHEET 1, (page 2)

11. Check the room carefully for any hazards. For example, a foot stool may be located in a hazardous place such as in a doorway.
12. Remember to thoroughly follow all your facility's policies and procedures for cleaning and maintaining radiographic rooms. If you do not understand any of the procedures, be sure to check with your supervisor and ask for an explanation.

INSTRUCTOR'S FINAL CHECKLIST

MAINTAINING THE RADIOGRAPHIC ROOM

The student should be evaluated according to the performance ratings in the box. Indicate on a separate sheet of paper whether the student's performance for each item is Fully Accomplished, Partially Accomplished, Not Accomplished, or under certain circumstances, Not Applicable.

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated Not Accomplished or Partially Accomplished, the student and instructor will decide which learning activities must be repeated.

Fully Accomplished	Partially Accomplished	Not Accomplished	Not Applicable
-----------------------	---------------------------	---------------------	-------------------

In maintaining the radiographic room and the equipment, the student:

a. Damp dusted the tabletop.....	☐	☐	☐	☐
b. Cleaned the tabletop with a disinfectant after an infectious case was examined.....	☐	☐	☐	☐
c. Dusted and cleaned tube stands, fluoroscopic assembly, and stools.....	☐	☐	☐	☐
d. Polished metallic parts.....	☐	☐	☐	☐
e. Did not use water on the electrical portions of the unit.....	☐	☐	☐	☐
f. Cleaned the cassette fronts with disinfectant-dampened cloths.....	☐	☐	☐	☐
g. Covered the holders and cassettes with clean toweling.....	☐	☐	☐	☐
h. Cleaned the film holders thoroughly.....	☐	☐	☐	☐
i. Disinfected the film holders.....	☐	☐	☐	☐
j. Changed towels, pillowcases, and sheets.....	☐	☐	☐	☐
k. Used a deodorizing spray as necessary.....	☐	☐	☐	☐
l. Maintained a comfortable temperature range.....	☐	☐	☐	☐
m. Wiped up spills on the floor.....	☐	☐	☐	☐
n. Checked the room for hazards.....	☐	☐	☐	☐
o. Followed the facility's policies and procedures for maintaining the radiographic rooms.....	☐	☐	☐	☐

CHECK-OUT ACTIVITY

The statements below explain the activity you must be able to complete in order to finish this module. As you go through the activity, your instructor will rate your performance using the Instructor's Final Checklist, MAINTAINING THE RADIOGRAPHIC ROOM.

Your instructor will assign you a radiographic room needing routine maintenance. Clean and maintain the room and the equipment.